Date: Fri, 29 Oct 93 04:30:38 PDT
From: Ham-Homebrew Mailing List and Newsgroup <ham-homebrew@ucsd.edu>
Errors-To: Ham-Homebrew-Errors@UCSD.Edu
Reply-To: Ham-Homebrew@UCSD.Edu
Precedence: Bulk
Subject: Ham-Homebrew Digest V93 #87
To: Ham-Homebrew

Ham-Homebrew Digest Fri, 29 Oct 93 Volume 93 : Issue 87

Today's Topics:

Send Replies or notes for publication to: <Ham-Homebrew@UCSD.Edu>
Send subscription requests to: <Ham-Homebrew-REQUEST@UCSD.Edu>
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Ham-Homebrew Digest are available
(by FTP only) from UCSD.Edu in directory "mailarchives/ham-homebrew".

Date: 28 Oct 93 16:27:23 GMT
From: auratek!epacyna@uunet.uu.net
Subject: Homebrew SSB
To: ham-homebrew@ucsd.edu

In article <CFL187.85B@csn.org>, dfeldman@teal.csn.org (Dave Feldman) writes:
> Ed - I would *just love* to reproduce your transceiver - would you be
> willing to publish or copy the schematic & pc board pattern? I think
> it would be a great construction project, as someone recently pointed out
> here that msot of the home brew projects are CW and I really like
> SSB QRP.
> 73 Dave WB0GAZ

I would suggest getting a copy of Ham Radio Magazine, November 1985. K1BQT
publlished a 75M SSB transceiver with PCB artwork. The circuits are very
similar (he used several PCB boards vs my one). It is very simple to change
the L/C values and BFO offset to make this into a 20M transceiver.

73 Ed W1AAZ

Date: 29 Oct 93 00:23:44 EDT
From: sdd.hp.com!math.ohio-state.edu!caen!nic.umass.edu!noc.near.net!
delphi.bc.edu!bcvms.bc.edu!lewisbc@network.ucsd.edu
Subject: how to: spl meters
To: ham-homebrew@ucsd.edu

What would be necessary to make an inexpensive spl meter?
And if made, how would you calibrate it? any info would be
useful

Thanks in advance,

Brendan

Please send it to lewisbc.bcvms.bc.edu

Date: Tue, 26 Oct 1993 16:48:24 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!sdd.hp.com!
nigel.msen.com!ilium!rcsuna.gmr.com!kocrsv01!c2xjcb@network.ucsd.edu
Subject: How to do CW with a cb?
To: ham-homebrew@ucsd.edu

In article <al152511.751337973@academ07>, al152511@academ01.mty.itesm.mx (Ricardo
Rodriguez Marroquin) writes:
>
>   Hello, everybody in the group!!
>
>   I am looking to practice the code to get an amateur license, and would like to
know if there is a way to make a cb radio to transmite in CW, or how to make it
transmite with a "fake" CW, only using a key to make noise, and comunicate with a
partner equi> ped in the same manner.
>
>
>   Does anyone have try this, and it worked?
>
> Our radios have extra frequencies and we live in in a rural area, so it is very
few the disturbance we could cause, if any, to the neighbor cbers.
>
>   Any comments would be very apreciated.
>
>
>   Entonces vinieron por mi,
>   y para entonces,

> no habia nadie que hablara en mi favor
>
>
>

Why clutter-up the air-waves (even if it is only the CB band)?

Why not just build a "code practice oscillator" with a simple key
(I made the key I use "for real" out of a 6"x6" piece of particle
board, some molding-trim, a hacksaw blade broke in 2, and a wooden
drawer knob) a battery, and a buzzer (Radio Shack item)?
--
James C. Bach Ph: (317)-451-0455 The views & opinions expressed
Advanced Project Engr. GM-NET: 8-322-0455 herein are mine alone, and are
Powertrain Strategy Grp Amateur Radio: WY9F NOT endorsed, sponsored, nor
Delco Electronics Corp. Just say NO to UNIX! encouraged by DE or GM.

Date: Wed, 27 Oct 1993 16:31:27 GMT
From: dog.ee.lbl.gov!agate!spool.mu.edu!umn.edu!gold.tc.umn.edu!
fede0001@network.ucsd.edu
Subject: How to do CW with a cb?
To: ham-homebrew@ucsd.edu

I agree. No sense in sending CW over the airwaves to learn, when you can
just build or buy a CW practice keypad. That, along with practice tapes
can help you learn your code without being a nuisance on CB airwaves.

Of course, what *isn't* a nuisance on the CB airwaves? :)

****
* * *
* Jason E. Gross (KB0JZP) * "The gene pool has no lifeguard." *
* fede0001@gold.tc.umn.edu * *
* University of MN (TC) * Views expressed within are mine, all MINE! *
* * *
****

Date: 28 Oct 1993 15:23:32 GMT
From: library.ucla.edu!agate!howland.reston.ans.net!darwin.sura.net!udel!
newsserv.cs.sunysb.edu!rick@network.ucsd.edu
Subject: SSB/CW project ?
To: ham-homebrew@ucsd.edu

Zack Lau (zlau@arrl.org) wrote:
: In rec.radio.amateur.homebrew, zlau@arrl.org (Zack Lau) writes:
: >In rec.radio.amateur.homebrew, ouzo@Alex.Engr.Trinity.Edu
: >(Petros Petropoulos) writes:
: >>
: >>Here is the question: Does anyone have a project (schematic
: >>plus construction info, i.e., pcb layouts etc.) for a
: >>multiband SSB/CW exciter ? Say 0.5 watts ? How about a
: >>general coverage exciter ?
: >
: >So far, the only project I've seen with pcb layouts is the modular
: >HF transceiver, by Mike Grierson G3TSO/KD3CL. It appeared first
: >in the October/November 1993 Radio Society of Great Britian's

: oops, those were 1988 issues of RadCom

: BTW, I've considered working on a miniature transceiver using
: the latest in SMD chips, but from what I've been able to gather,
: such a project would generate lots of flames from amateurs
: too old to work with tiny little parts. As a result, the only
: amateur use I've made of my 10x magnifier is to read the laser
: printing on 55 mil chip caps.

: --Zack

 Not everyone would complain about parts size ;-) The toughest
 problem I've found with SMD semiconductors thus far is getting them
 in small quantities. For example, one salesperson at Active
 told me that Motorola does not let them break down reels of
 semiconductors into smaller quantities "for quality control reasons".

     Rick Spanbauer, WB2CFV
     State U of NY/Stony Brook

Date: Tue, 26 Oct 1993 16:51:39 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!vixen.cso.uiuc.edu!sdd.hp.com!
nigel.msen.com!ilium!rcsuna.gmr.com!kocrsv01!c2xjcb@network.ucsd.edu
Subject: SSB/CW project ?
To: ham-homebrew@ucsd.edu

In article <1993Oct23.153920.7267@ringer.cs.utsa.edu>, ouzo@Alex.Engr.Trinity.Edu
(Petros Petropoulos) writes:
> I have been away from the hobby for 9 years and now that some
> free time materialized I wish to jump in again. However, the
> rig prices I see are through the roof ! Sooo, I have decided
> to buy a receiver (still looking, maybe the FRG-100B, does

> anyone know how god this receiver is ?) and to homebrew the
> transmitter.
>
> Here is the question: Does anyone have a project (schematic
> plus construction info, i.e., pcb layouts etc.) for a
> multiband SSB/CW exciter ? Say 0.5 watts ? How about a
> general coverage exciter ?
>
> 73s de KA2KEV/SV0BU
>

There was an article in one of the ham-mags a few years back (I can't
remember which mag it was in; perhaps "Ham Radio" or "CQ" ?) that
did a conversion of a Radio Shack SSB CB rig. I'm thinking it was
for 10M, but perhaps it was 20M. Power was typical CB SSB 12W or so.
Perhaps you could go to the library and dig-back thru some issues
and with luck find the article.
--
James C. Bach Ph: (317)-451-0455 The views & opinions expressed
Advanced Project Engr. GM-NET: 8-322-0455 herein are mine alone, and are
Powertrain Strategy Grp Amateur Radio: WY9F NOT endorsed, sponsored, nor
Delco Electronics Corp. Just say NO to UNIX! encouraged by DE or GM.

Date: 27 Oct 93 14:08:31 EDT
From: pipex!sunic!psinntp!psinntp!arrl.org@uunet.uu.net
Subject: SSB/CW project ?
To: ham-homebrew@ucsd.edu

In rec.radio.amateur.homebrew, zlau@arrl.org (Zack Lau) writes:
>In rec.radio.amateur.homebrew, ouzo@Alex.Engr.Trinity.Edu
>(Petros Petropoulos) writes:
>>
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>>plus construction info, i.e., pcb layouts etc.) for a
>>multiband SSB/CW exciter ? Say 0.5 watts ? How about a
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the latest in SMD chips, but from what I've been able to gather,

such a project would generate lots of flames from amateurs
too old to work with tiny little parts. As a result, the only
amateur use I've made of my 10x magnifier is to read the laser
printing on 55 mil chip caps.

--Zack

>Radio Communications (often called RadCom) and was reprinted in
>the August/September 1989 issues of QEX. It does use parts not
>commonly found in the US, but I've heard of people using their
>credit cards for international transactions.
>
>Zack Lau KH6CP/1
>
>Internet: zlau@arrl.org   "Working" on 24 GHz SSB/CW gear
>   Operating Interests: 10 GHz CW/SSB/FM
>US Mail: c/o ARRL Lab   80/40/20 CW
> 225 Main Street   Station capability: 1.8 MHz to 10 GHz
> Newington CT 06111
>
>Phone (if you really have to): 203-666-1541
>
>

Date: 27 Oct 1993 14:59:52 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!math.ohio-state.edu!
news.acns.nwu.edu!casbah.acns.nwu.edu!rdewan@network.ucsd.edu
To: ham-homebrew@ucsd.edu

References <2ajm3n$t2a@news.acns.nwu.edu>, <2ajpgb$u0@news.acns.nwu.edu>,
<2ak7el$kfm@cc.tut.fi>acns
Subject : Re: INTERMOD

In article <2ak7el$kfm@cc.tut.fi>,
Kein{nen Paul <k23690@lehtori.cc.tut.fi> wrote:
>
>Rajiv Dewan rdewan@casbah.acns.nwu.edu wrote:
>
>> For a while I liked the simplicity and ease of construction of using
>> a parallel tuned shorted stub for rejecting intermod. After trying it
>> and computing the impedance it became evident that it did not do much.
>
>> The impedance presented by the shorted stub is
>>   50*Tan(157.345/147.345 * Pi/2) = -467 ohms (capacitative)
>> in parallel with the antenna. This will may not do much to attenuate
>> the offending signal at 157.345.

>
>I had similar experiences when I tried to help a new ham, who had
>severe intermods on his HT from a nearby FM (100 MHz) station.
>First we tried a shorted 1/4 wave stub at 145 MHz without much
>help. By calculating the impedance in the 87-108 MHz range, it was
>clear why it did not work as expected.
>
>A new shorted stub tuned to 1/2 wave of the unwanted frequency was
>installed and this helped a lot, not only reducing the intermods
>from the BC-station but also reducing intermods from a pager system,
>which is only 600 kHz above our repeater output frequency.
>
... a few lines have been deleted for brevity ...

Yes. An open stub is a much better attenuator than a shorted stub as
a pass band filter. This becomes evident when one examined the impedance
graph: tan(l) (or cot(l)) where l is the length in radians.   However,
there is one problem with the latter approach.

Consider a desired signal at 146MHz and an undersired one at 100MHz. If
you put in a parallel open stub which is 1/4 wavelength long at 100MHz
then the it will present an impedance of 44 ohms capacitative in parallel
with the load at operating frequency of 146MHz. This will affect the SWR
presented to the transmitter.

I am reminded of Scylla and Charybdes, and in a more contemporary vein,
of being between a rock and a hard place.

Of the two, I would prefer your suggestion of tuning an open stub to the
offending frequency.

Rajiv
aa9ch
r-dewan@nwu.edu

Date: 27 Oct 1993 19:52:07 +0200
From: agate!howland.reston.ans.net!pipex!sunic!news.funet.fi!butler.cc.tut.fi!
lehtori.cc.tut.fi!not-for-mail@ames.arpa
To: ham-homebrew@ucsd.edu

References <2ajpgb$u0@news.acns.nwu.edu>, <2ak7el$kfm@cc.tut.fi>,
<2am2d8$ngf@news.acns.nwu.edu>.cc
Subject : Re: INTERMOD

Rajiv Dewan (rdewan@casbah.acns.nwu.edu) wrote:

> Consider a desired signal at 146MHz and an undersired one at 100MHz. If
> you put in a parallel open stub which is 1/4 wavelength long at 100MHz
> then the it will present an impedance of 44 ohms capacitative in parallel
> with the load at operating frequency of 146MHz. This will affect the SWR
> presented to the transmitter.

At resonance an open 1/4 wave (90 degree) stub acts a shorted
1/2 wave (180 degree) stub, both representing a short circuit.

In a similar way a shorted 1/4 wave stub is equivalent at resonance to an
open 1/2 wave stub, both representing an open circuit.

Shorted stubs are generally prefered, as it is more difficult to make a
non-radiating open stubs at these frequencies.

That is why I used a shorted 1/2 wave stub at the undesired frequency
(100 MHz). As this stub is 180 degrees long at 100 MHz it is 261 degrees
long at 145 MHz and the impedance is over 315 ohms (=50*tan(261 deg)),
representing an insignificant load to the feed line. This was verified
by a SWR check.

You could also experiment with higher multiples of the 1/4 wavelenght
to get one series resonance exactly on the undesired frequency and the
desired frequency close to some paralell resonance. As the physical
lenght of the stub conductor is increased, the losses will also
increase, reducing the Q of the series resonance, ultimately limiting
such constructions to a few multiples of 1/4 wavelenght.

Paul OH3LWR

Date: Wed, 27 Oct 1993 17:05:14 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!news.moneng.mei.com!uwm.edu!
linac!uchinews!att-out!walter!dancer!whs70@network.ucsd.edu
To: ham-homebrew@ucsd.edu

References <al152511.751337973@academ07>,
<1993Oct26.164824.6621@kocrsv01.delcoelect.com>,
<fede0001.751739487@gold.tc.umn.edu>lter
Subject : Re: How to do CW with a cb?

Hello, everybody in the group!! I am looking to practice the code to get an
amateur license, and would like to know if there is a way to make a cb radio to
transmite in CW, or how to make it transmite with a "fake" CW

In article <fede0001.751739487@gold.tc.umn.edu> fede0001@gold.tc.umn.edu (Jimbo)
writes:
>I agree. No sense in sending CW over the airwaves to learn, when you can
>just build or buy a CW practice keypad. That, along with practice tapes
>can help you learn your code without being a nuisance on CB airwaves.
>Of course, what *isn't* a nuisance on the CB airwaves? :)

Consider also the possibility of just getting the code-free technician
license and then practicing CW in the above 50 MHz bands. There are
several ways to do this: (1) using a conventional multi-mode VHF
transceiver that includes CW capability and (2) using an FM rig whereby
you use a code practice oscillator to generate the morse code
(i.e. CW-like) code characters.

It should be mentioned that all technician class licensees can use CW
(or FM CW simulation) without having to have passed the CW test.
It would seem to be a good idea for local groups of hams (codeless,
as well as others) to establish a regular practice net on one
of the unused VHF frequencies in their area.

Good luck.

Standard Disclaimer- Any opinions, etc. are mine and NOT my employer's.

Bill Sohl (K2UNK) BELLCORE (Bell Communications Research, Inc.)
Morristown, NJ   email via UUCP   bcr!cc!whs70
201-829-2879 Weekdays   email via Internet whs70@cc.bellcore.com

---

Date: 27 Oct 1993 15:02:19 GMT
From: dog.ee.lbl.gov!agate!howland.reston.ans.net!math.ohio-state.edu!
news.acns.nwu.edu!casbah.acns.nwu.edu!rdewan@network.ucsd.edu
To: ham-homebrew@ucsd.edu

References <18OCT199311442350@vax2.concordia.ca>, <2ahetv$7ig@news.acns.nwu.edu>,
<2alivj$11q7@ilx018.intel.com>cas
Subject : Re: INTERMOD

In article <2alivj$11q7@ilx018.intel.com>,
Doug Braun <dbraun@iil.intel.com> wrote:
>
>I think it would be a great idea if somebody sold
>a little box, about an inch or two long, with a bnc connector on each
>end, that contained maybe a 7-element bandpass filter....

TOKO has a whole line of sub miniature helical filters that would work
just fine. They do have about 6db insertion loss, however....

Rajiv
aa9ch
r-dewan@nwu.edu

End of Ham-Homebrew Digest V93 #87
****
****